

given year requires that dates of the last negative HIV test result and subsequent positive test result be ascertained. This is possible if a group of initially uninfected persons are retested at regular intervals.<sup>2</sup> These types of studies, however, are expensive. Statistical techniques are currently being developed to estimate incidence from serial point-prevalence studies of the same population but have yet to be rigorously tested.<sup>3</sup> It is also possible to obtain minimum estimates of HIV incidence from persons attending anonymous test sites if questions are included to ascertain the date of the last HIV-negative test and the date of the subsequent positive test.<sup>4</sup> Such estimates should also include an adjustment for those who retest after their initial HIV-positive result.

Given the biases presented earlier, estimates of new infections based solely on the data presented should be substantially less than 1,000. Even if HIV incidence among those populations tested were estimable, results would likely underestimate incidence because of the many asymptomatic HIV-infected Nevadans who have not yet been tested. Given that Nevada accounts for 0.4% of AIDS cases in the United States<sup>1</sup> and the nationwide estimate is 1 million people living with HIV,<sup>5</sup> there may be over 4,000 Nevadans who are HIV-positive.

The incidence of HIV provides the most direct measurement of the spread of HIV, but accurate estimates are not easily obtainable. Seroprevalence and testing data provide more accessible but less direct measurements of disease spread and may provide information about HIV incidence in certain situations if used carefully.

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#### Dr Jarvis Responds

TO THE EDITOR: Singleton and colleagues correctly state that the data presented in the recently published brief article concerning AIDS and HIV infection in Nevada<sup>1</sup> are inadequate for purposes of estimating HIV incidence accurately. As they briefly outline, attempts to estimate the incidence of HIV infection in populations are complicated by a number of possible biases, such as repeat testing of persons with positive test results, difficulties verifying unique test results in unlinked or anonymous testing programs, and the potentially lengthy asymptomatic lead time after seroconversion. The efforts to overcome these problems so that HIV incidence rates can be more accurately estimated are appropriate.

Whatever the true incidence of HIV infection is in Nevada, the increasing AIDS incidence rate and the continued spread of HIV infection among Nevadans should compel the attention of state policymakers to public health measures likely to reduce future HIV-related morbidity and mortality.

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#### Thyroid Dysfunction and False Pregnancy

TO THE EDITOR: I read the recent interesting report by Drs Caudill and Lardinois on thyrotoxicosis and psychosis.<sup>1</sup> Psychiatrists have long been aware of the changes in mental state associated with thyroid dysfunction.<sup>2</sup> Somatic complaints are also frequently described by patients in addition to changes in mood, cognition, and sensory perception. I was struck by the description of Drs Caudill and Lardinois's patient's particular fear of being pregnant (she was sexually active, although no other reason for her fears were reported). I recently reported two cases of delusional pregnancy (or, as I dubbed it, "pseudo-pseudocyesis") in patients with manifestations of Hashimoto's thyroiditis and hyperthyroidism ("Pseudo-pseudocyesis" and Hashimoto's Thyroiditis, *Northern California Psychiatric Physician* newsletter, September 1991, p 7). Both patients presented with delusional symptoms, including an unshakable belief in being pregnant. One patient had organic mania; the other was diagnosed with major depressive disorder.

The disruptive effect of thyroid disease on normal menstrual cycling is well recognized.<sup>3</sup> The changes in mental state with thyroid disease can lead to distortion and misinterpretation of reality.<sup>1</sup> Changes in catecholamine receptor density in the central nervous system, second-messenger adenosine 3':5'-cyclic phosphate processes, and "false neurotransmitter phenomenon" may account for the psychiatric disturbances.<sup>4</sup> The amenorrhea or dysmenorrhea that may accompany thyroid disturbances in women could be misinterpreted as a pregnancy, particularly in patients with changes in mental state. It seems prudent to evaluate full thyroid functions in patients with false pregnancy, or pseudocyesis.

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